

**PIKES PEAK
RADIO AMATEUR
ASSOCIATION
(PPRAA)**

Activities/Meetings

- Ham Breakfast
Saturday, June 6th
Doug's,
3659 Austin Bluffs Park-
way
Join us between
8:00-9:30 AM
All are warmly invited
- PPRAA General Class
Wednesdays
Fountain Library
- PPRAA Board Meeting
Mon, June 8th
IHOP
- PPRAA general member-
ship meeting, Wednes-
day, June 10th.
- 10 Meter/2 Meter net
Every Thursday 7:00 pm
28.390 MHz—USB
144.200 MHz-USB

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Volume 65 Issue 06

June 2015

PPRAA—General Licensing Class

The PPRAA licensing class for the General Class ticket is going well. There are 9 students and 4 instructors.

The text for the class will be the General Licensing Course from HamRadioSchool.com. Stu, the book's author has created excellent PowerPoint slides and audio clips to accompany the book. Because the PowerPoint is part of his intellectual property, a Non Discloser Agreement (NDA) is required by each instructor.

This book, PowerPoint teacher's aid, and the additional material on the web site really make teaching much easier than expected. Not only is the book well written with explanations made easy to understand, so is the instructor's material and the material on the website.

We are hoping all the class member study hard, and pass the general license test during the VEC test session at the Megafest, July 11th.

FCC Eliminates Amateur Radio Vanity Call Sign Regulatory Fee

The FCC offers amateur radio licensees the opportunity to request a specific call sign for a primary station and for a club station.

A vanity call sign is selected by the FCC from a list of call signs requested by the station licensee or the club station license trustee. Military recreation stations are not eligible for a vanity call sign.

The FCC is eliminating the regulatory fee to apply for an Amateur Radio vanity call sign. The change will not go into effect, however, until required congressional notice has been given. This will take at least 90 days. As the Commission explained in a Notice of Proposed Rulemaking, Report and Order, and Order (MD Docket 14-92 and others), released May 21, it's a matter of simple economics.

"The Commission spends more resources on processing the regulatory fees and issuing refunds than the amount of the regulatory fee payment," the FCC said. "As our costs now exceed the regulatory fee, we are eliminating this regulatory fee category." The current vanity call sign regulatory fee is \$21.40, the highest in several years. The FCC

reported there were 11,500 "payment units" in FY 2014 and estimated that it would collect nearly \$246,100.

"The Commission often receives multiple applications for the same vanity call sign, but only one applicant can be issued that call sign," the FCC explained. "In such cases, the Commission issues refunds for all the remaining applicants. In addition to staff and computer time to process payments and issue refunds, there is an additional expense to issue checks for the applicants who cannot be refunded electronically."

Obviously they could continue to raise the fees until fee connection exceeded the cost of processing the fees. The FCC instead elected to eliminate the fees.

73,
Dan—WØRO

Article is based on information from the FCC website and the ARRL announcement.



PPRAA Officers and Board of Directors

PPRAA Board of Directors consists of four elected officers, seven board members, as well the past president (time limit dependent). The Ø-Beat editor is a board appointed position and is also a member of the board.

Officers include:

- ⇒ President
- ⇒ Vice-President
- ⇒ Secretary
- ⇒ Treasurer

To send board member's email, browse to the officers section of our website: <http://ppraa.org/about-ppraa/officers>

President	Raleigh Holcomb	N4HYF
Vice-President	Jim Bishop	KDØKQL
Secretary	Diana Nordstrom	KCØNPP
Treasurer	Pam Scott	WØPRS
Past President	Michael Derbort	KCØELG
Board Member	Dan Martin	KDØSMP
Board Member	Glenn Brodt	N3ULW
Board Member	Jim Rader	KDØNQM
Board Member	Charlie Coyner	KD6CBC
Board Member	Jim Harris	WØEM
Board Member	Virgil Yost	NØXRS
Board Member	Frank Roger	KB3PDT
Ø-Beat Editor	Dan Scott	WØRO
Webmaster	Doug Nielsen	N7LEM

Online Resources

PPRAA Website

<http://ppraa.org>

The PPRAA website is the cornerstone for club related information, events, and technical information.

In addition you can register, pay dues, and submit donations. Donations to the PPRAA college scholarship fund are managed by FAR Scholarship Committee

Facebook / Google+

Follow activities as they unfold, or get reminders of upcoming events.

Links to both Facebook and Google+ social media sites can be found on the PPRAA.org.

Or from each social media site search on: Pikes Peak Radio Amateur Association

PPRAA Forums

The PPRAA forums are intended to allow users to exchange of ideas, ask and answer amateur radio related questions, and plan/discuss upcoming events.

This is a fantastic, but underutilized, tool. Check it out and register at: PPRAA.Forumotion.net

Monthly Activities

Membership Meeting

Held the 2nd Wednesday of the month starting at 7:00.

IHOP
5749 Stetson Hills Blvd
(just west of Powers Blvd)

NOTE: Many show up at 6 pm for kibitzing and grub.

Board Meeting

IHOP
5749 Stetson Hills Blvd

6:30pm—8:00pm
On the Monday preceding the membership meeting.

Board Meetings are open to all members.

Ham Breakfast

Location changes monthly: Check ppraa.org or table of contents, page I for the breakfast meeting location.

10 Meter/2 Meter Net

Every Thursday at 7pm
Starts on 28.390 USB then transitions to 2 Meter SSB at 144.200 USB.



Meeting Presentation Topics

Last Meeting

Bdale Garbee, KBØG, discussed the Fox satellite design, how to work them, and describe the next few satellites in the series and what their payloads will be.

This Month's Meeting

Field Day planning

Next Meeting

Sand Dunes expedition

Coaxial cable line calculator

While checking some of the ham radio forums, a ham posted a great web site:

<http://timesmicrowave.com/calculator/?productid=52>

[Ed: From Amphenol's Times Microwave Systems]

This is a "FREE" coaxial cable line calculator. It is easy to use

and provides a plethora of information.

To use, fill in the blanks:

- Select the coax
- Select the coaxial cable length
- Select the frequency of operation

With this information the program will tell you everything you need to know about how it performs and how much power the cable can handle at your selected frequency. They also provide a mobile version.

73,
Glenn, n3ulw
Information for the article is based on post on W3OK forum.

Field Day

Field Day started in 1933 based on a tiny column in QST suggesting as many stations as possible go into the field and contact as many other stations as possible. The objective was portable disaster preparedness. The winner of year one was W4PAW with 62 QSOs.

Today there are many aspects to Field Day and as many club or personal objectives to Field Day. But, the underlying objective of Field Day remains disaster preparedness but with a contest flair. It is often-times called the amateur radio "non-contest contest".

No matter how you think of Field Day, it does test your ability to setup and operate in an emergency.

If the overall objective is disaster setup and operation in the field, then why do they have all

the points and contest rules?

Field Day is like no other (non-contest) contest. It is primarily focused on disaster operation, with many sub-objectives to include, public visibility, introduction to amateur radio via the "Get on the Air" (GOTA) station, science and technology with AMSAT or some other demonstration mode, social event for the club, or a contest.

For making contacts, the directional antenna is king, and logging is its queen. Field Day is noisy (QRM), you will hear stations near "your" frequency and the beam mitigates some of that interference, improves the received signal for easier copy, as well as helps others make a cleaner copy on your signal. Logging is the other critical factor. Logging is either done by the person operating the radio or by a designated opera-

tor. Today the most common method for logging is using a computer and the most common program is NIMM. If paper logging, then 1 or 2 people do the logging. If there are 2 people logging, one person is running the dup-sheet and the second is recording the information.

HAM Nation has a good YouTube covering Field Day preparation at:

<https://www.youtube.com/watch?v=V0iEpBe9Y5w>

This is a long video, but if you are not familiar with Field Day or if you want a nice refresher, learn about NIMM, then this is a good one.

73 Dan



PPRAA Board Meeting Minutes—11 May 2015

Call To Order - 18:32

Approval of the April Meeting Minutes - Pam moves to accept as published on the website and in the Zero Beat, Dan S. second, board approves.

Committee reports

Treasurer's Report - \$11,238.95

Station Move Report - trailer is completely wired, looking for a place for a shed. Have equipment for lighting the shed. Ed recommends buying a battery booster if we intend to run radios out of the trailer.

Building Report - Virgil has a lead on a gentleman that builds sheds, going to be 18x16. Shed needs to be painted once it arrives. Cost includes setup, with blocks around the entire base. \$1900, with \$1000 donated. It has been recommended to skirt the trailer. Maintenance: need to remove the air conditioner and replace it with a fan and cover. Roof needs to be resealed to prevent leaks.

Megafest 2015 - \$1,011 in tickets sold so far this year.

Field Day Committee - Been listed on the ARRL locator

Zero Beat - Still need articles! Submit articles to zero-beat@ppraa.org

Tech Ed - General Class License class is doing well, 9 students

ARES - May 30 North Cheyenne Canyon Run need 8 volunteers, June 14 GOG 10 Mile Run need 12, MTCC ride June 20th need 20, June 28 PP Intl Hill Climb need 35, July 12 SRTR need 8, pp ascent & marathon July 15 & 16 need 22 for Ascent & 20 for Marathon

Around the table

Raleigh - Falcon 50 was fun, highly recommend

others to participate

Mike A - Leaving on Thurs for DXpedition to the Sand Dunes. In camping area 1. Saturday is Armed Forces Day so they'll be activating K0USN.

Doug - CCARC meeting, 5 new clubs, reelected board members. Repeater frequency pairs - none available, waiting list is 10yrs+. CO 5315-041 bill passed and they got the picture in the Ø-beat. Please contact your federal rep to get the federal level bill passed. Next meeting will be in Canyon City, in Oct. Hamcon Colorado will be in Keystone on May 13-15 2016.

Jim B. - SK Glenn Hooper, KE0AQP

Virgil - would like to make a letter or certificate for the gentlemen who made the pole and mount plate for the fence at the ranch

Jim H. - Will be out of town next month, need to discuss the repeater situation Jim H motions to give the repeater to Ellicott Fire Department Ham Club, Glenn seconds, board approves.

Email Motions -

May 5 - Frank motions that the General Class be considered an official Club project, Diana seconds, 1 dissention, the board passes the motion.

May 6 - Dan motions that we maintain and re-apply for an ARRL Special Services Club status, Diana seconds, the board approves.

Next Board Meeting: June 8th, Location: IHOP

Adjourn - Doug motions to adjourn, Virgil seconds, 19:34

PPRAA General Meeting Minutes—13 May 2015

Call To Order – 18:58

Introductions

Silent Keys - Glenn Hooper, KE0AQP

Approval of the March Meeting Minutes - Pam moves to accepted as published on the website and in the Zero Beat, Mark seconds, club approves

Committee reports

Treasurer's report - \$11,238.95, just under \$3000 is reserved.

Building Report - 8x16 for storage, will be built, delivered and set up on blocks, for \$1900 delivered. \$1000 has been donated towards that price. John motions to approve \$900 for the purchase of the shed, Charlie seconds, club approves. The shed will be wired for electricity. Looking for volunteers to set up a committee for station budget

Megafest 2015 - Raffle tickets up \$500 from last year. \$1,011 sold.

Field Day committee - Next month! Is listed on ARRL's website. Let local scout troops know to drop by!

Zero Beat - Need more articles! Please send them to zerobeat@ppraa.org as often as you wish. Include [ZeroBeat] in the subject. cc: w0prs@me.com to guarantee receipt.

Tech Ed - General class meetings every Wednesday starting May 6th. This is a club sponsored event. Contact Dan W0RO if you wish to teach or be a student. They are also looking for Show and Tell items.

CSVHFS Conference - 23-26 July at the Denver Marriott in Westminster. Check the website for more information.

Special Event Station -

Sand Dunes starting May 14 to 17, on Saturday is Armed Forces Day special event station, call USN. Come join them at Campground 1. Will require National

Parks admittance fee.

HamCon 2016 - Will be in Keystone on May 13-15. Will need to buy convention meals ahead of time.

HamCon Utah 2015 - Bryce Canyon, UT 31 Jul-2 Aug

ARES - 18th April presentation to Red Cross.

Evacuation exercise for the Palmer Park area following weekend, also a statewide Red Cross exercise. Falcon 50 on , 170 runners. Coming up: North Cheyenne Canyon Run on 30 May, need 8 have 5 volunteers. GoG 10mi on 14th June, need 12 have 6 volunteers. City holding a community emergency preparedness day on 31st May at Sky Sox. Contact John Bloodgood for more information on any ARES events.

HR-1301 - US House of Rep version of CO 5315 -041. Do not have our local rep (Lamborn) co-signing it yet. Please contact ARRL to send a letter to your local rep.

VE Sessions - Special testing on May 16. Club sponsored sessions every even month on Second Saturdays, Monument's Club hosts on odd months.

10m Net - 28.390 USB at 7pm on Thursdays.

Next Meeting: June 15th, Location: IHOP

Adjourn - 17:41



Dayton was a Blast this Year?

By Dan Romanchik, KB6NU



A couple of weeks ago, I made my annual pilgrimage to Dayton for the 2015 Hamvention. This year, I had even more fun than in the past, and that's saying a lot.

I started Dayton 2015 on Thursday by attending the QRP-ARCI's Four Days in May (<http://www.qrparci.org/fdim/>) seminar. George Dobbs, G3RJV, gave a very nice talk that not only talked about circuits, but also the people he's met over the years and the places he's been. Paul, M0XPD, gave an interesting talk on crystal filters and using an Arduino to control a QRP rig. The final talk, by Glen, KW5GP, was also about using an Arduino to control a QRP rig. Other talks covered transmission lines and SWR and adventures in PCB making. I learned something in every single one.

That evening, I participated in Vendor's Night. I sold quite a few copies of my CW Geek's Guide to Having Fun with Morse Code and gave out quite a few "I'm a CW Geek" buttons and "Hams Obey Ohm's Law" stickers.

Friday and Saturday were all about the Hamvention. As far as new products go, there were a couple of interesting announcements. Elecraft introduced the K3S, an updated and upgraded K3 HF Transceiver, and FlexRadio introduced the Maestro, a "front end" with knobs, dials, and LCD screen for their

software-driven radios. Apparently, hams like knobs and dials after all.

It seemed to me that there were more people at this year's Hamvention. There were certainly more sellers out in the flea market. And deals were to be had. I picked up a Bencher BY-1 for only \$50. I also found a Hallicrafters HA-1 T.O. Keyer (http://www.ai4fr.com/main/page_ham_radio_hallicrafters_ha1.html), which I believe to be the first commercially-available electronic keyer. Produced in the 1960s, it uses tubes to generate dots and dashes.

Dayton usually has a great lineup of forums, but aside from perhaps the TAPR forum, the Antennas forum, and maybe the ATV forum, none of them really called to me. Also, I was really busy talking to people I know, meeting readers, and trying to get the dealers to carry my books, so I didn't get to a single one.

Being the CW geek that I am, I'm hoping to hold a CW forum at next year's Hamvention. I've already contacted the forum people, and while they haven't committed to giving me time, I did get a very positive response. C U THR?

When he's not attending the Dayton Hamvention, Dan, KB6NU enjoys working CW on the HF bands and teaching ham radio classes. For more information about his operating activities and his "No-Nonsense" series of amateur radio license study guides, go to KB6NU.Com or e-mail cwgeek@kb6nu.com.



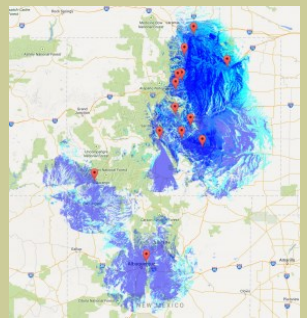
NEW BOOK!

The CW Geek's Guide to Having Fun with Morse Code is now available in PDF, Kindle, and Nook e-book formats.

Written in my "no non-sense" style, this book is designed to not only help you get started in CW, but to have fun doing it.

Page waiting for an article

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Rocky Mountain Ham Radio
CO MotoTRBO coverage



ISOTRON 20 (TOP)

“Once again, I wanted to thank you for “getting me on the air”! My high-rise condo environment is one of the most challenging imaginable for HF, **yet the Isotrons have accomplished what other antennas can not.** I’ve included a pic of my new Isotron 20 in my shack. (I have not yet paired it with the 40.) Other hams have told me to try various antennas including stringing a dipole across my ceiling, but nothing has worked for me. I’m not saying that I’m a power station with the Isotron, I most certainly am not...in fact it’s amazing I can get out at all, but I’ve worked many states and I’ll be able to participate in next week’s contest, all with a neat, low profile indoor installation. That really says a lot.

Thanks again, 73.
Matt Siegel, KB9ECJ

Practical Use of Decibel and SWR Values—Part 2

Last month a brief definition of a decibel was explained, along with the formula for power gains or losses.

We normally keep track of our Standing Wave Ratio. Some meters have a scale that

indicate Reflected Power Percentage. Such as a 3:1 SWR indicates reflecting 25% power. Sounds like quite a loss, but how much is it in what we hear?

To give you an idea of how much difference you will actually hear, we will use a simple example.

Our Load is a resonant antenna or a pure resistive load at values other than 50 ohms. Either way the Load looks the same if we are right at the resonant point of the antenna.

Now we can look at a nomogram. What is that? Ho ho, it makes life simpler. It has forward power (horizontally) compared to reflected power (vertically). There are several straight lines at a 45 degree angle across the graph that represent various SWR values.

We will pick an unacceptable SWR like 10:1. On the SWR meter it will appear like nothing is going out. However on the nomograph at 10 watts forward, it shows reflected at 5 watts. Only half the power measured is reflected. How does that calculate in dB?

Using our formula from last month it figures at 2.3 dB loss. With most receivers this will be a little over 1/3 of an S unit. However at the same time, our ears will detect the loss.

This figure will vary with loads that are not a pure resistance and will increase with frequency. However it gives you an idea of what your actually losing. So why is it at a 10:1 SWR you are not getting heard at all?

This is not due to reflected loss. The solid state radios will only provide a small amount of power out at this high of SWR.

If you are at 10:1 SWR due to moving frequency from where your SWR is 1:1, you will find by using a Tuner to cancel the reactance, you will allow the radio to put full

power out.

Many have been surprised that communications can do well with this high mis-match when compensated by a Tuner.

This is a very controlled example, just to give you an idea of what a loss may sound like. It can get quite complicated, however, unless we are into antenna design, it is not necessary to be overly concerned.

If you are dealing with a high SWR, use the Tuner to reduce it. This will allow the radio to put maximum power out and it is a protection to the transistorized power amp. In many cases performance will be fine.

73,
Ralph WD0EJA

MAY 2015

BILAL COMPANY
137 MANCHESTER DR.
FLORISSANT, CO. 80816
U.S.A
PH/FX: 719/687-0650
wd0eja@isotronantennas.com

A nomogram—Wikipedia

A nomogram (from Greek νόμος nomos, "law" and γραμμή grammē, "line"), also called a nomograph, alignment chart or abaque, is a graphical calculating device, a two-dimensional diagram designed to allow the approximate graphical computation of a function.

You don't have to be present to win!



Pikes Peak Radio Amateur Association, Inc.



Megafest – July 11th
RAFFLE PRIZES



Yaesu FT-991 value \$1,670

Programming software donated by RT Systems

ICOM ID-5100A Dual Band D-Star – value \$725

Donated by Cheyenne Mountain Repeater Group

Programming software donated by RT Systems

Yaesu FT-7900R – value \$324

Programming software donated by RT Systems

Yaesu FT-60R – value \$150

Programming software donated by RT Systems



Yaesu
FT-60R

Rig Expert AA-54 antenna analyzer – value \$350

Butternut HF6XV – antenna – value \$390

Tickets:

\$1	1 ticket
\$5	6 tickets
\$10	15 tickets
\$20	40 tickets

For table reservations:

ppraa.org/Megafest
\$15 per table
\$ 5 admission

You don't have to be present to win!



VE Testing & Education—Colorado Springs (PPRAA)

Pikes Peak Radio Amateur Association (PPRAA)

When:
Feb, Apr, Jun, Aug, Oct, Dec
2nd Saturday at 9 AM

Location:
Colorado Technical University (CTU)
4435 North Chestnut
Colorado Springs, CO 80907

Directions available at:
ppraa.org/ve-testing
or contact:
Dan Martin
VE@PPRAA.org



Mike Anderson, WV7T does personal and small group training for all license classes.

Mike also does Morse code training.

Mike can be reached at:
719-229-8610
vv7t@aol.com

VE Testing Woodland Park (MARC)

MOUNTAIN AMATEUR RADIO CLUB (MARC)

When:
Jan, Mar, May, Jul, Sep, Nov
1st Saturday at 10 AM

Location:
Woodland Park
Woodland Park Library-
Community Meeting RM
218 East Midland Avenue

Directions:
<http://www.nx0g.org/ve.html>
or contact
Wes Wilson (KØHBZ)
k0hbz@arrl.net
Call (719) 687-8758



Applicants will need the following items:

1. A valid PHOTO ID, driver's license preferred (if you do not have a valid photo ID, please call for alternative identification requirements).
2. Your FRN or SOCIAL SECURITY NUMBER (now required – this includes children).
3. Your CURRENT ORIGINAL amateur radio license (if any) and a PHOTOCOPY for the VE Team to keep.
4. The CURRENT ORIGINAL CSCEs you have and a PHOTOCOPY for the VE Team to keep.
5. Cash, Check or Money Order for \$15 (standard ARRL VE Fee). Checks and money orders should be made out to ARRL. This covers all exams you wish to take at this VE session.

Teams, is to not allow same day retests on failed exams.

PPRAA – Colorado Springs testing only:

Anyone passing their Technician Class examination at a PPRAA test session will receive a free year's membership to the Pikes Peak Radio Amateur Association

NOTE: PPRAA and MARC VE Team policy, as with many VE

Megafest - Call to Action

Megafest is just around the corner!

If you use amateur radio related email reflectors, please add a Megafest by-line or signature to you emails. Something like:

"See you at Megafest July 11th: <http://ppraa.org/megafest> "

Table reservations are currently \$15 but will increase to \$17 after July 5th.

These little non-annoying (less-

annoying) advertisements go a long ways.

If you get asked about Megafest please direct them to our web site or provide the additional information. Whichever you feel comfortable with. The direct link is easy to remember:

<http://ppraa.org/megafest>.

Again we have amazing prizes with the grand prize gaining a lot of attention at Hamfests and club meetings. Jim did another outstanding job at

prize selection!

Please plan on helping with the success of Megafest:

Setup:

July 10th: 4PM to 6PM Friday

Megafest:

July 11th:

◆ 6AM-8AM –Vendor setup

◆ 8AM-1PM - Megafest

◆ 1PM-2:30—Takedown

PPRAA Scholarship Fund

The PPRAA scholarship was established with the vision that it would be a deserving young ham that keeps on giving. However, that can be realized if the scholarship continues to be funded year after year. Individual hams, clubs, and organizations, are kindly asked to consider supporting the scholarship's future and its great cause through a tax-deductible contribution, even if just a few

dollars. Contributions may be made via the PPRAA website (<http://ppraa.org>) as part of the membership renewal, or at club meetings and event.

The scholarship fund can be reached at:

FAR Scholarship Committee
P.O. Box 911
Columbia, MD 21044

The PPRAA is a not-for-profit 501c3 organization. As a benefit, all contributions will be acknowledged with a tax receipt letter and are deductible to the full extent of the law.

**PIKES PEAK RADIO
AMATEUR
ASSOCIATION**

Send membership application to:

Pikes Peak Radio Amateur
Association, Inc.
P.O. Box 16521
Colorado Springs, CO 80935

General Questions:
ppraa@ppraa.org

ØBeat:
zerobeat@ppraa.org



ppraa.org

Get Radio Active, get on the air!

Membership Application:

Date: ____ / ____ / ____ **New Membership: Yes / No**

Name: _____

Address: _____

City/State/Zip: _____

Call: _____ **Class:** ____ **Phone # (____)** _____

Email: _____

Are you a ARRL member: Yes / No

Additional Family Members:

Name1: _____ **Call:** _____ **Class:** ____ **ARRL Member: Yes / No**

Name2: _____ **Call:** _____ **Class:** ____ **ARRL Member: Yes / No**

Name3: _____ **Call:** _____ **Class:** ____ **ARRL Member: Yes / No**

____ \$15.00 Full Member

____ \$10.00 Full Member over 65

____ \$18.00 Family Membership

____ \$12.00 Family Membership over 65

\$____ **Membership Amount**

\$____ **Scholarship Fund Donation**

\$____ **PPRAA General Fund Donation**

\$____ **Total**

2015 Scholarship Fund

Please help

Ø- Beat Banner

Photo by Dan—WØRO.

This photograph was taken May 22th from Garden of the Gods. Seemed to be a fitting picture for May 2015.

The theme of the banner is Pikes Peak. If you would like to submit pictures for the Ø-Beat banner, please send them to:
zerobeat@ppraa.org

Please Include "[Ø-beat]" as part of the subject line.